

# Determining a Scottish EU-ETS cap for 2017

The following paper documents the calculations which determine the 'specified amounts' for emissions from (i) fixed installations located in Scotland and covered by the EU emissions trading system (EU-ETS) and (ii) aviation covered by the EU-ETS.

This paper follows on from, and uses identical calculations to papers released in June 2015, January 2016, February 2017 and January 2018, which document the calculation of the specified amount for Scottish EU-ETS emissions for 2013, 2014, 2015 and 2016. These papers can be downloaded from the Scottish Government website<sup>1 2 3 4</sup>.

## Part 1: Fixed Installations Cap

### Auctioned allowances

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The Committee on Climate Change has recommended<sup>5</sup> that the amount of auctioned allowances assigned to Scotland should equal the UK allowances for a given year multiplied by the share of verified emissions from Scottish fixed installations during the Period 2005-2007 inclusive. The National Atmospheric Emissions Inventory<sup>6</sup> contains the following estimates for verified emissions resulting from onshore installations only, as offshore installations are covered by the free-allocation of emissions allowances.

Table 1: Verified onshore emissions

Year	Scotland	UK
2005	20.463	233.651
2006	24.196	242.108
2007	22.253	243.624
2008	23.765	264.861
2009	21.962	231.753
2010	24.041	237.234
2011	20.056	220.690
2012	20.349	231.084

All values MtCO<sub>2</sub>e

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<sup>1</sup> <http://www.gov.scot/Topics/Statistics/Browse/Environment/Publications/EUETScap2013>

<sup>2</sup> <http://www.gov.scot/Topics/Statistics/Browse/Environment/Publications/EUETScap2014>

<sup>3</sup> <http://www.gov.scot/Topics/Statistics/Browse/Environment/Publications/ETScap2015>

<sup>4</sup> <https://www2.gov.scot/Topics/Statistics/Browse/Environment/Publications/EUETScap2016>

<sup>5</sup> <https://www.theccc.org.uk/publication/scotlands-path-to-a-low-carbon-economy/>

<sup>6</sup> [http://uk-air.defra.gov.uk/reports/cat07/1406100836\\_DA\\_GHGI\\_1990-2012\\_EmissionsData\\_Issue1.xlsx](http://uk-air.defra.gov.uk/reports/cat07/1406100836_DA_GHGI_1990-2012_EmissionsData_Issue1.xlsx)

The Scottish share of UK onshore verified emissions over the period is  $(20.463+24.196+22.253)/(233.651+242.108+243.624) = 9.30\%$  (rounded).

The amount of auctioned emissions allowances assigned to the UK during 2017 can be found at the Intercontinental Exchange's website<sup>7</sup>, this value equals 105,960,000 allowances; an increase from the equivalent level in 2016 (83,747,500).

The number of auctioned allowances for Scotland in 2017 is  $(105,960,000 \times 9.30) = 9,855,549$  tCO<sub>2</sub>e.

## Freely-Allocated Allowances

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Similarly to the UK, the amount of freely allocated emissions allowances for Scotland can be obtained from the NIMs<sup>8</sup>. This source indicates that an amount of **5,778,410 tCO<sub>2</sub>e** was allocated to Scottish installations in 2017.

## New Entrant's Reserve

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For the 2013 calculation, we consulted with a number of external stakeholders on the treatment of the New Entrants Reserve (NER). This considered whether to adopt the UK approach which involves imputing a notional amount of NER allocation; or base the calculation on actual use of the NER. As the NER figure for Scottish installations in 2013 was in fact zero, it was agreed that imputing a notional amount lacked credibility and that actual use of the NER would instead be monitored and added to the cap as required.

The Scottish Environmental Protection Agency has confirmed that there are two new entrants receiving a free allocation of allowances in 2017 and, combined, these installations were allocated **8,646 tCO<sub>2</sub>e** of allowances.

## Summary

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Table 2: Scottish EU-ETS Cap for 2017.

Component	2017 Allocation tCO <sub>2</sub> e
Auctioned allowances	9,855,549
Free allocation	5,778,410
New Entrant's Reserve	8,646
<b>Total</b>	<b>15,642,605</b>

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<sup>7</sup> <https://www.theice.com/publicdocs/circulars/17171.pdf>

<sup>8</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/318902/uk\\_national\\_allocation\\_table\\_phase\\_III\\_free\\_allocation.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/318902/uk_national_allocation_table_phase_III_free_allocation.pdf)

## Part 2: Aviation Cap.

The calculation of the allocation for domestic and international aviation was described in detail in the paper describing the 2013 calculation. The aviation cap is a constant level so the 2013 allocation has been carried forward

The method for calculation of the domestic and international aviation cap uses data from the European Environment Agency and the Scottish Greenhouse Gas Inventory. The domestic aviation cap and international aviation cap are calculated using a similar approach to the UK's domestic aviation cap for 2013<sup>9</sup>, 2014<sup>10</sup>, 2015<sup>11</sup> and 2016<sup>12</sup>.

The aviation cap was calculated using 1990-2012 inventory data for both the EEA and for Scotland. This is because the latest publicly available data for inventories outside of Scotland and the UK at the time of determining the cap (July 2015), was the 1990-2012 inventory. This may be reviewed in any future calculations of the aviation cap so that the most recent inventory can be used.

## Part 3: Total EU-ETS cap for Scotland, 2017

Table 3. Total EU-ETS cap for Scotland, 2017

Component	2017 Allocation tCO <sub>2</sub> e
<b>Fixed Installations</b>	<b>15,642,605</b>
<i>Auctioned allowances</i>	9,855,549
<i>Free allocation</i>	5,778,410
<i>New Entrant's Reserve</i>	8,646
<b>Aviation</b>	<b>1,365,013</b>
<i>Domestic</i>	443,255
<i>International</i>	921,758
<b>Total 2017 Cap</b>	<b>17,007,618</b>

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<sup>9</sup> <https://www.gov.uk/government/statistics/annual-statement-of-emissions-for-2013>

<sup>10</sup> <https://www.gov.uk/government/publications/annual-statement-of-emissions-for-2014>

<sup>11</sup> <https://www.gov.uk/government/publications/annual-statement-of-emissions-for-2015>

<sup>12</sup> <https://www.gov.uk/government/publications/annual-statement-of-emissions-for-2016>